

Draft UIC Permit Technical Review with EPA

Wed 06/02/2010 9:00 AM - 11:00 AM

Attendance is **required** for Michele Dermer

Chair: Damonica.Pierson@Shell.com

Sent By: [<Damonica.Pierson@Shell.com>](mailto:Damonica.Pierson@Shell.com)

Location: WCK Meeting Room TBD and Telecon 713/423-0600 or 1-866-761-0750, PIN 12857986#

Required:

Rich.Moen@shell.com, Haibin.Xu@shell.com, Robin.Ozah@shell.com, ken.flodberg@shell.com, Brian.Perry@shell.com, Michele Dermer/R9/USEPA/US, George Robin/R9/USEPA/US

Time zones:

This entry was created in a different time zone. The time in that time zone is: Wed 06/02/2010 11:00 AM CDT - 1:00 PM CDT

Description

Meeting Purpose: To review and discuss Shell's comments on the Draft UIC Permit

Dialing Instructions: 713/423-0600 or 1-866-761-0750, PIN 12857986#

EPA Attendees: Michele Dermer--Environmental Scientist, UIC and George Robin--Engineer, UIC

Shell Attendees: DaMonica Pierson--Sr. Technical Advisor, Rich Moen--Project Leader, CO2 Sequestration, Haibin Xu--Petrophysicist, Robin Ozah--Reservoir Engineer, Ken Flodberg--Drilling Engineer, Brian Perry--Well Completions Engineer

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Personal Notes

Rev 1

Technical Review Discussion with C6 on the April 2010 Draft UIC permit

Questions on the Redline of the draft permit submitted by C6

Shell to
propose
- Revise
wording.

1. Page 9 – Why was the requirement for the computation of reservoir compressibility deleted?
2. Page 9 – Why was the reporting of the pressure build up deleted?
3. Page 11- please provide additional language on Fluorescein to include in the permit
4. Page 11 – provide additional explanation of the mini injectivity test – which formation will it be conducted on? *Anderson.*
5. Page 11 – why “may” the initial FOT be conducted, rather than “shall” be conducted?
6. Page 13 – why is the final FOT deleted?
7. Page 17 – the application (Page 8 – Attachment P) says one well for seismic monitoring, permit now says three – please clarify. Also, need to include correct explanation of monitoring equipment and data to be provided.
8. Page 19 – what is the source of the carbon dioxide?
9. Page 28 – thermal conductivity monitoring – clarify wording of what information will be monitored and reported.
10. Additional Monitoring – if additional monitoring is proposed it should be identified and included in the permit.
11. Page 31 – must provide reports to agencies listed
12. Appendix I – Operation Time line – why deleted?

Additional questions from application

1. Attachment L, Page 12 – where is there an existing approved injection well in Rio Vista?
2. Attachment O, Page 1 – who is the Executive Director?
3. Attachment P. Page 8 – are there more details on the proposed 100 foot well for seismic monitoring?
4. How many seismic array wells will be installed and how does C6 plan to construct and permit these? Plans for their P&A?

Telecom 6/2/10

- ① Hai bin → taking core analysis → takes time
estimate only geomechanical study

Interim - estimate

- ② Pobin - not expecting high permeabilities
not produce @ a constant rate.
efforts to produce the brine with N_2

Brine - preferred option - flow.
use an echo meter →

- ③ Anderson → Sandstone.

Mini frac →

Small volume injected into the form

Fm breakdown pressure & F_{pp} .
More accurate.

Compare mini frac Test

Deliberative Privilege ex. (5)

Bottom hole pressure - to correlate to surface gauges.

is

- ⑤ FOT - condition in case they cannot produce
enough brine

Will observe the falloff in minifrac/SRT.

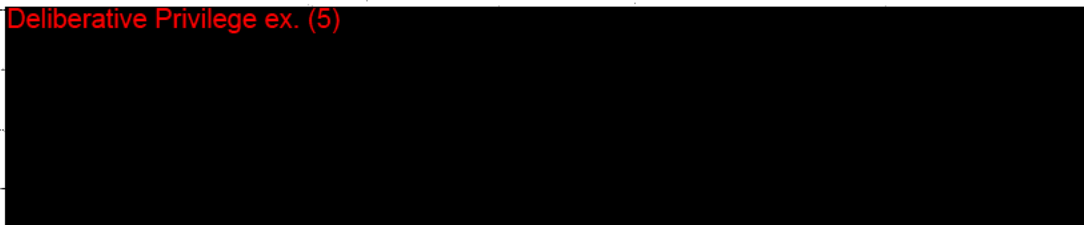
⑥ May not have enough time

FOT w/ CO₂

→ Food grade CO₂ purchased. gas provider.

→

Deliberative Privilege ex. (5)



Timeline → w/o dates

2 PST

→

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